# Materials Declaration Form

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|---|---|---|---|
| **IPC** | **1752** | **Version** | **2** |
| **Form Type *** | Distribute | | |
| **Sectionals *** | Material Info<br>Manufacturing Info | **Subsectionals *** | A-D<br>*** : Required Field** |

| | | | |
|---|---|---|---|
| **Supplier Information** | | | |
| **Company Name *** | **STMicroelectronics** | **Response Date *** | **21-07-2023** |
| **Company Unique ID** | **NL 008751171B01** | | |
| **Contact Name *** | Refer to Supplier Comment section | | Refer to Supplier Comment section |
| **Contact Phone *** | Refer to Supplier Comment section | **Contact Email *** | Refer to Supplier Comment section |
| **Authorized Representative *** | **Material Declaration champion** | **Representative Title** | **Material Declaration champion** |
| **Representative Phone *** | Refer to Supplier Comment section | **Representative Email *** | Refer to Supplier Comment section |
| **Supplier Comment** | Online Technical Support - STMicroelectronics :<br>http://www.st.com/web/en/support/support.html | | |

**Uncertainty Statement**

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**Legal Statement**

| | | | |
|---|---|---|---|
| **Supplier Acceptance *** | **true** | **Legal Declaration *** | **Standard** |
| **Legal Statement** | Supplier certifies that it gathered the provided information and such information is true and correct to the best of its knowledge and belief, as of the date that Supplier completes this form. Supplier acknowledges that Company will rely on this certification in determining the compliance of its products. Company acknowledges that Supplier may have relied on information provided by others in completing this form, and that Supplier may not have independently verified such information. However, in situations where Supplier has not independently verified information provided by others, Supplier agrees that, at a minimum, its suppliers have provided certifications regarding their contributions to the part(s), and those certifications are at least as omprehensive as the certification in this paragraph. If the Company and the Supplier enter into a written agreement with respect to the identified part(s), the terms and conditions of that agreement, including any warranty rights and/or remedies provided as part of that agreement, will be the sole and exclusive source of the Supplier’s liability and the Company’s remedies for issues that arise regarding information the Supplier provides in this form. | | |

Signature Not
Verified

Digitally signed by
MDF Champion
Date: 2023.07.21
10:50:45 +08:00

| **Product** | | | | |
|---|---|---|---|---|
| **Mfr Item Number** | **Mfr Item Name** | **Version** | **Mfr Site** | **Date** |
| STM32U5F7VJT6Q | E51L*476XXXZ | A | 9991 | 21-07-2023 |
| | **Amount** | UoM | **Unit type** | **ST ECOPACK Grade** |
| | 681.44 | mg | Each | ECOPACK® 2 |
| . | Comment | ECOPACK® 2 is STMicroelectronics trade name for ROHS compliant device without Brominated and Chlorinated compound (900ppm) and without Antimony oxide flame retardant ( in each organic material) | | |

| **Manufacturing information** | | | | |
|---|---|---|---|---|
| **J-STD-020 MSL Rating** | **Classification Temp** | **Nbr of Reflow Cycles** | | |
| 3 | 260 | 3 | | |
| **bulk Solder Termination** | **Terminal Plating** | **Terminal Base Alloy** | **Comment** | |
| Not Applicable ; if coating is used or other bulk termaination : add in comments | Tin (Sn), matte | Copper Alloy | | |

| **Package Designator** | **Size** | **Nbr of instances** | **Shape** | |
|---|---|---|---|---|
| QFP | 14x14 | 100 | L bend | |
| **Comment** | Package : 1L LQFP 100 14x14x1.4  1 0086901 | | | |

| QueryList : RoHS Directive 2011/65/EU-July 2011 – Annex II amended by Directive 2015/863-April 2015 | |
|---|---|
| **Query** | **Response** |
| 1 - Product(s) meets EU RoHS requirement without any exemptions | **TRUE** |
| 2 - Product(s) meets EU RoHS requirements except lead in solder and this usage may qualify under the lead in solder '7b' exemption (other selected exemptions may apply) | FALSE |
| 3 - Product(s) meets EU RoHS requirements by application of the selected exemption(s) | FALSE |
| 4 - Product(s) does not meet EU RoHS requirements and is not under exemptions | FALSE |

| **Exemption Id.** | **Description** |
|---|---|
| | |

| QueryList : REACH-10 Jun 2022 | |
|---|---|
| **Query** | **Response** |
| 1 - Product(s) does not contain REACH Substances Of Very High Concern above the limits per the definition within REACH | **true** |

| CategoryLevel_Name | CategoryLevel_Threshold | amount in product (mg) | Application | ppm in product |
|---|---|---|---|---|
| | | | | |

| **Material Composition Declaration :**<br>note : Substance present with less 0.001mg  will not be declared in this document | | | | | | **Mfr Item Name** | **E51L*476XXXZ** | | | | 6000001.0 | 1000001.3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Homogeneous Material** | **Material Group** | **Mass** | **UoM** | **Level** | **Substance Category** | **Substance** | **CAS** | **Exempt** | **Mass** | **UoM** | **Concentration in homogeneous material (ppm)** | **Concentration in product (ppm)** |
| Die  or dies | M-011 Other inorganic materials | 29.101 | mg | supplier | die | Silicon (Si) | 7440-21-3 | | 27.983 | mg | 961582 | 41065 |
| | | | | supplier | metallization | Aluminium (Al) | 7429-90-5 | | 0.124 | mg | 4261 | 182 |
| | | | | supplier | metallization | Copper (Cu) | 7440-50-8 | | 0.368 | mg | 12646 | 540 |
| | | | | supplier | metallization | Nickel (Ni) | 7440-02-0 | | 0.002 | mg | 69 | 3 |
| | | | | supplier | metallization | Tantalum (Ta) | 7440-25-7 | | 0.063 | mg | 2165 | 92 |
| | | | | supplier | metallization | Titanium (Ti) | 7440-32-6 | | 0.016 | mg | 550 | 23 |
| | | | | supplier | metallization | Tungsten (W) | 7440-33-7 | | 0.002 | mg | 69 | 3 |
| | | | | supplier | Passivation | Silicon Nitride | 12033-89-5 | | 0.088 | mg | 3024 | 129 |
| | | | | supplier | Passivation | Silicon Oxide | 7631-86-9 | | 0.455 | mg | 15635 | 668 |
| Leadframe (C7025) | Copper & its alloys | 190.000 | mg | Supplier | Leadframe | Copper (Cu) | 7440 – 50 - 8 | | 179.360 | mg | 944000 | 263207 |
| | | | | Supplier | Leadframe | Silver (Ag) | 7440 – 22 – 4 | | 2.850 | mg | 15000 | 4182 |
| | | | | Supplier | Leadframe | Magnesium (Mg) | 7439 – 95 – 4 | | 0.333 | mg | 1750 | 488 |
| | | | | Supplier | Leadframe | Silicon (Si) | 7440 – 21 – 3 | | 1.378 | mg | 7250 | 2021 |
| | | | | Supplier | Leadframe | Nickel (Ni) | 7440 - 02 – 0 | | 6.080 | mg | 32000 | 8922 |
| Glue epoxy (CRM-1076WA) | Precious metals | 5.800 | mg | Supplier | Glue or tape | Silver Powder | 7440-22-4 | | 4.431 | mg | 764000 | 6503 |
| | | | | Supplier | Glue or tape | Bisphenol F Type Epoxy Resin | 9003-36-5 | | 0.174 | mg | 30000 | 255 |
| | | | | Supplier | Glue or tape | Epoxy resin | Proprietary | | 0.348 | mg | 60000 | 511 |
| | | | | Supplier | Glue or tape | Hardener | Proprietary | | 0.174 | mg | 30000 | 255 |
| | | | | Supplier | Glue or tape | Ethylene dimethacrylate | 97-90-5 | | 0.435 | mg | 75000 | 638 |
| | | | | Supplier | Glue or tape | 1,4-Cyclohexanedimethanol diglycidyl ether | 14228-73-0 | | 0.174 | mg | 30000 | 255 |
| | | | | Supplier | Glue or tape | Dicyandiamide | 461-58-5 | | 0.032 | mg | 5500 | 47 |
| | | | | Supplier | Glue or tape | 1,1-Di(t-butylperoxy)cyclohexane | 3006-86-8 | | 0.032 | mg | 5500 | 47 |
| Bonding wire (Au) | Precious metals | 1.700 | mg | Supplier | Bonding wire | Gold | 7440-57-5 | | 1.680 | mg | 988500 | 2466 |
| | | | | Supplier | Bonding wire | Palladium | 7440-05-3 | | 0.020 | mg | 11500 | 29 |
| Encapsulation (EME-G631SH) | M-011 Other inorganic materials | 433.940 | mg | Supplier | Molding Compound | 2,2'-((3,3',5,5'-Tetramethyl-(1,1'-biphenyl)-4,4 | 85954-11-6 | | 17.358 | mg | 40000 | 25472 |
| | | | | Supplier | Molding Compound | Epoxy resin | Proprietary | | 8.679 | mg | 20000 | 12736 |
| | | | | Supplier | Molding Compound | Phenol Resin | Proprietary | | 32.546 | mg | 75000 | 47760 |
| | | | | Supplier | Molding Compound | Silica(Amorphous) A | 60676-86-0 | | 307.880 | mg | 709500 | 451809 |
| | | | | Supplier | Molding Compound | Silica(Amorphous) B | 7631-86-9 | | 65.091 | mg | 150000 | 95520 |
| | | | | Supplier | Molding Compound | Carbon black | 1333-86-4 | | 2.387 | mg | 5500 | 3502 |
| External Plating | M-011 Other inorganic materials | 20.900 | mg | Supplier | Matte Sn | Tin (Sn) | 7440-31-5 | | 20.898 | mg | 999900 | 30667 |
| | | | | Supplier | Matte Sn | Impurities | - | | 0.002 | mg | 100 | 3 |